

8. PILOT TESTING OF THE FOREST NURSERY ACCREDITATION SYSTEM IN THE PHILIPPINES DENR REGION 10

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In the Philippines, seedling nursery accreditation is being carried out only on nurseries producing seedlings of fruit trees and this is administered by the Department of Agriculture. No accreditation of forest nurseries is being practiced by the Department of Environment and Natural Resources. The need to have such accreditation was identified in the series of workshops on the ACIAR Seedling Enhancement Project conducted in Philippines Regions 8 and 10. The accreditation of forest seedling nurseries was pilot tested in Region 10 specifically in the CENRO Office in Malaybalay City. Further progress continues to be made on refining the accreditation scheme, although additional resources and planning efforts are required to fully implement the scheme.

INTRODUCTION

Tree plantation development has been going on in the Philippines Region 10 for decades. This includes reforestation areas in both production and protection forests. Also included are large areas of industrial plantations or holders of an Integrated Forest Management Agreement (IFMA), agroforestry farms, CBFM areas, pasture areas, and private plantations or small-scale tree plantations. The priority government program on environmental protection is tree planting. People are encouraged to plant trees because this will ensure additional income from the harvest of timber, and also because trees sequester carbon from the air thus mitigating climate change.

The open areas of Region 10 are suitable for tree plantation development. The soil is relatively rich and the rainfall is well distributed throughout the year except for a few months during the dry season. The growing period of trees is year-round, unlike in temperate countries where trees do not grow during winter. However, it is sad to note that in spite of the favourable conditions for growing trees, the income of the private tree planters is minimal. The timber yield ranges only from 60–80 m³/ha which is very low. The timber price (PhP/m³) is also low because the form of the timber is poor. In private plantations, the survival rate of outplanted trees is observably low, the growth of seedlings is slow, and the trees are branchy, leaning and stunted.

Most of the tree planters raise their own seedlings to be used in their tree plantation development. They merely construct temporary nurseries using light materials. In some cases, seedlings are purchased from private nursery operators in Region 10. Tree farmers prepare the plantation areas by cutting grasses and other weeds with the help of their close relatives. Holes are dug and after planting the seedlings, they conduct maintenance and protection of the established plantations. They seldom replant dead seedlings and no fertilizer is applied. In case of infestation by pest and disease, no control measure is applied. Excessive pruning of branches is conducted while the tree is still short, under the impression that this will produce straight boles; however, the main impact is reduced photosynthesis and thus retarded growth.

As low seedling quality is a major contributor to poor plantation performance, forestry nursery production of improved seedlings is vigorously promoted by the DENR, one of the major initiatives being the introduction of an accreditation system to ensure nurseries adopt best management practices. This paper reports the progress in the design and implementation of the nursery accreditation system.

FIELD OBSERVATIONS ON NURSERY PRACTICES AND PLANTATIONS

The following indicators of poor performance in forestry seedling nurseries were obtained from field observation:

1. Seed collection practices. Nursery operators collect seeds and wildlings from any available sources. In most cases, they collect seed from trees that are stunted, short and branchy because seed collection is easier and they can collect more seeds. They also purchase any available seeds of preferred species from any source without knowing where the seeds come from.
2. Nursery practices and facilities. Many of the nursery operators do not have adequate training in the appropriate nursery techniques that will produce high quality seedlings. Their nursery facilities are of a low standard and they rely on whatever knowledge they have. The potting media or soil used is not appropriate with the result that the seedlings they produce have observable low quality. Inspection of the roots of seedlings reveals that these are often deformed.
3. Tree plantations. The survival rate of outplanted seedlings is quite high but the growth is poor. The quality of the plantation is low, with most trees showing stunted growth and poor stem form, with lack of straightness and low branches and forks. Low timber yield can be expected at harvest, as well as low prices on the sale of the timber to processors. The income of the tree farmers is, therefore, far from what could be expected from the plantations.

DENR 10 STRATEGY TO IMPROVE TREE PLANTATION

DENR Region 10 has introduced a number of measures to improve tree plantations.

Establishment of Seed Production Areas

Pursuant to Department Administrative Order (DAO) No. 95-09 dated 29 March 1995, 'Regulation of Forest Tree Seed Production, Collection and Disposition', Region 10 was able to establish several seed production areas (SPAs) or seed sources (SSs) for selected commercial forest tree species. Table 1 reports the locations of established SPAs and SSs in Region 10.

The limited areas of existing SPAs and SSs in Region 10 are not able to supply enough high quality planting materials (seeds, cuttings and wildlings) to the reforestation program of DENR 10, including private tree planters. There is a need to establish more SPAs and SSs, particularly in Misamis Occidental, Lanao del Norte and Camiguin as SPAs and SSs are absent in these provinces.

Table 1. Seed production areas in Philippines Region 10 (Northern Mindanao)

Location	Species	No. of candidate trees	Area (ha)
East Poblacion, Kitaotao, Bukidnon	Molave	63	3
Malasag Refo Project, Malasag	Teak	186	2
Cugman, Cagayan de Oro City	Mahogany	106	2
CMU, Musuan, Bukidnon	Yemane	15	1
	Narra	11	
Impalutao Refo Project, Impalutao	Mahogany	71	
Impasug-ong, Bukidnon	Saplungan	125	
	White lauan	105	
	Almon	30	
	Tanguile	124	
	Red lauan	4	
	Guijo	5	
	Narra	11	
Mambajao, Camiguin	Molave	20	
	Malabulak	9	
	White lauan	20	
ERDS Experimental Forest, Sumpong	Mahogany	5	

Pilot Testing of Accreditation of Forest Nurseries in Region 10

The involvement of DENR ERDS 10 in the ACIAR-funded project on nursery socio-economics and policy –, implemented through Visayas State University, Baybay, Leyte in association with The University of Queensland – brought about an awareness of the need for forest nursery accreditation in Region 10, particularly in the CENRO Malaybalay area of jurisdiction. After a series of consultations, workshops and conferences conducted in Regions 8 and 10, the ACIAR Seedling Enhancement Project focussed on developing strategies promoting the production of high quality planting materials and accreditation of forest nurseries including the training of nursery operators in appropriate nursery techniques.

DENR ERDS 10 drafted a Memorandum Circular on 'Piloting of Accreditation and Management of Forest Nurseries in CENRO Malaybalay', after prior consultation with the CENR Officer Felix Mirasol with regard to the plan to pilot it in his area of jurisdiction, which includes the cities of Malaybalay and Valencia and the municipalities of Lantapan, Cabanglasan and San Fernando. The draft Memorandum Circular was reviewed by a committee headed by Regional Technical Director Corazon Galinato of the Forest Management Services together with selected senior staff of DENR 10, including PENR Officer Ernesto Lezada, For. Jose Reyes (Chief of Forest Conservation Division of FMS), For. Fidel Gamos (Chief of Forest Development Division of FMS), and For. Manolito Pasco (Chief of the Environment and Resources Research Division of ERDS). After incorporating all the suggestions and comments, the final draft was submitted to the then Regional Executive Director Ernesto Adobo Jr of DENR 10 for approval. DENR 10 Memorandum Circular No. 2009-001 on 'Piloting of Accreditation and Management of Forest Nurseries in CENRO Malaybalay' was approved by RED Ernesto Adobo Jr. on 6 October 2009. This Memorandum Circular has as a stated objective the creation of the Forest Nursery Accreditation Committee and Malaybalay Nursery Assessment Team, and prescribes their membership and functions, who can apply for accreditation, requirements for accreditation, accreditation criteria, the accreditation process and fees charged.

Objectives of the Memorandum Circular

The objectives of Memorandum Circular are to:

1. pilot test the accreditation process of forest nurseries in CENRO Malaybalay;
2. ensure the continuous production and supply of high quality planting materials such as seedlings, wildlings or cuttings of various forest tree species to be used in reforestation, tree plantations, agroforestry, rehabilitation of watersheds and other plantings;
3. accredit and manage forest nurseries to supply high quality planting materials coming only from established seed production areas, seed sources, seed orchards and from other sources of high quality materials; and
4. provide livelihood options to the people but ensure that they will produce and supply high quality planting materials thus increasing productivity of forest plantations.

A Forest Nursery Accreditation Committee has been formed, with a chairperson (RTD for Research of ERDS), co-chairperson (RTD for Forestry) and four other members (the PENRO of Bukidnon, CENRO of Malaybalay, Chief of Ecosystems Research and Development Division, and Station Supervisor, ERDS Malaybalay Station.

The Forest Nursery Accreditation Committee has the following functions:

1. to review requests for accreditation of forest nursery operators;
2. to conduct a thorough assessment of the source of planting materials of nursery operators in order to ascertain that they will produce only high quality planting materials;
3. to evaluate the technical capabilities of nursery operators as a requirement for accreditation and update the operators' capabilities on new nursery techniques;
4. to approve or disapprove applications for nursery accreditation;
5. to conduct regular monitoring of accredited nurseries with emphasis on sources of high quality seeds, wildlings or cuttings from certified sources and on implementation of best nursery practices thereby producing high quality planting materials; and
6. to suspend or cancel accreditation permits for erring operators.

The agencies or individuals who can apply for accreditation of forestry nurseries include:

1. any local government unit, academe, government and non-government organization;
2. any individual, cooperative and corporation;
3. any nursery operator who has managed a forest nursery for at least the last six months prior to application.

The requirements for forest nursery accreditation include:

1. certification from DENR/ERDS that the planting materials – seed, wildlings or cuttings – are from certified seed sources such as seed production areas, seed sources, seed orchards or from private individuals or corporations practicing forest tree improvement or forest tree breeding or from seed banks of the DENR;
2. a certificate of attendance at training courses, workshops or lectures on nursery development and management conducted by the DENR or other recognized institutions;
3. certification that the operator of the nursery is applying the prescribed best management practices (BMP) for nursery operation;
4. a business permit from the municipal or city government where the nursery is located;

5. a certificate of registration from the Department of Trade and Industry, the Cooperative Development Administration or the Securities and Exchange Commission;
6. authenticated latest tax clearance;
7. a photograph of the nursery; and
8. a list of the nursery infrastructure.

An accreditation fee of PhP500 will be paid upon application by individual applicants and PhP1000 for cooperatives, corporations, LGUs, NGOs and academe.

The accreditation criteria will give emphasis to the following major concerns: 1) the physical quality of seedlings which will include seedling health, stem form, root form and sturdiness; 2) skills of nursery operators or their capacity to produce high quality planting materials; 3) nursery facilities; and 4) production capacity. There are corresponding credit points to be given to each criterion, towards a threshold score for acceptance.

The accreditation will follow a particular process:

1. Any individual, cooperative, corporation, LGU, NGO and academe who are presently operating a forest nursery can apply for accreditation.
2. Intending applicants should write to the PENRO, CENRO or the Regional Forest Nursery Accreditation Committee about their intention to accredit their nursery.
3. They should attach all the requirements for accreditation.
4. The Provincial Nursery Assessment Team will review the papers and schedule a visit for the field verification and assessment of the nursery to be accredited.

The Nursery Assessment Team will forward their report to the Regional Forest Nursery Accreditation Committee for approval or revision of the application for accreditation. Regular monitoring of the nursery operation will be conducted by the Nursery Assessment Team members. The report will be the basis for continuous operation, suspension or cancellation of the permit.

CREATION OF REGIONAL FOREST NURSERY ACCREDITATION COMMITTEE AND MALAYBALAY NURSERY ASSESSMENT TEAM

The Regional Special Order No. 21 was approved by RED Maximo Dichoso on 22 January 2010 and this pertains to the creation of the Regional Forest Nursery Accreditation Committee and the Malaybalay Nursery Assessment Team.

Memorandum Circular No. 2009-001 identifies the chair, co-chair and members of both the Regional Accreditation Committee and the Nursery Assessment Team including their functions.

A training and orientation activity for the Accreditation Committee and Assessment Team was conducted on January 26-27, 2010 at ERDS 10 Research Station in Malaybalay City. This event was funded by ACIAR and most of the resource persons came from Visayas State University, Baybay City, headed by Dr Nestor Gregorio. The participants of the training and orientation event included the RTDs for Research and Forestry, PENRO of Bukidnon, CENRO of Malaybalay, Chief of Research Division, Station Supervisor of ERDS Station in Malaybalay and selected technical staff of the PENRO and CENRO offices and ERDS 10.

RECENT DEVELOPMENTS

On 5 May 2010, the DENR Secretary, Horacio C. Ramos, approved the DENR Administrative Order No. 2010-11 on 'Revised regulations governing forest tree seed and seedling production, collection and disposition'. The objectives of this DAO are the following:

1. to ensure the continuous production of adequate supply of phenotypically and genotypically improved planting materials to meet the requirements for high quality seeds and seedlings in the establishment and development of tree plantations, tree farms, forest gardens, forestation, agroforestry, and rehabilitation of watersheds and coastal areas;
2. to develop a forest tree seed and seedling documentation and registry system for effective forest tree seed collection, handling and disposition, and for sustainable seedling production;
3. to develop an accreditation system for government, LGUs and private seed production areas for the operation of forest nurseries, to provide strategies and guidelines for the establishment, maintenance and protection of existing and potential SPAs, SSs, Seedling Seed Orchards (SSOs), Seedling Clonal Orchards (SCOs), and to update the seed calendar for each forest tree species.

Section 11 of the DAO makes mention of the 'Accreditation of Forest Nurseries' but there may be a need to further improve the system of nursery accreditation. It was agreed during the dialogue among the Executive Committee members of the Forest Management Bureau headed by FMB Director Marlo Mendoza, staff of ACIAR-VSU Baybay research group in Leyte headed by Dr Nestor Gregorio, and DENR 10 officials (RED Maximo O. Dichoso, RTD Corazon B. Galinato and RTD For. Danilo Cacanindin) that, after the approval of DAO 2010-11, an addendum to it will be made to incorporate the full guidelines for forest nursery accreditation.

RECOMMENDATION

The following policy implications or recommendations can be made on the basis of the experience and progress to date towards a forest nursery certification scheme:

1. Inasmuch as there are already forest nursery operators who have applied for accreditation with DENR 10, there is a need to have additional funds for the conduct of nursery assessment. There is also a need for continuous training on 'best nursery practices'.
2. There is a need to pursue with vigour the submission and final approval of an addendum on the full guidelines for forest nursery accreditation.
3. Additional funds should be sourced for the establishment, maintenance and protection of existing and potential SPAs and SSs.

REFERENCES

- Department Administrative Order (No. 95-09) 1995, *Regulations on Forest Tree Seed Production, Collection and Disposition*, signed by Secretary Angel Alcala on 29 March 1995.
- DENR 10 Memorandum Circular (No. 2009-001) 2009, *Piloting of Accreditation and Management of Forest Nursery in CENRO Malaybalay*, signed by RED Ernesto O Adobo, Jr on 6 October 2009.
- DENR 10 Regional Special Order No. 21 (Series of 2010) 2010, *Creation of Regional Forest Nursery Accreditation Committee and Malaybalay Nursery Assessment Team*, signed by RED Maximo O Dichoso on 22 January 2010.